

WHAT IS CLAIMED IS:

1. A method of outputting data read from a recording medium, comprising the steps of:  
decoding the data read from the recording medium; and  
embedding electronic watermark information in the  
decoded data if the decoded data is output as recording data.
  
2. A method according to Claim 1, further comprising  
the steps of determining the type of the recording medium,  
and changing said electronic watermark information based on  
a result of the determination.
  
3. A method according to Claim 2, further comprising  
the step of embedding, as said electronic watermark  
information, electronic watermark information indicating at  
least first generation recording allowed if the recording  
medium is a read-only recording medium.
  
4. A method according to Claim 3, further comprising  
the step of embedding, as said electronic watermark  
information, electronic watermark information indicating  
recording prohibited if the recording medium is a recordable  
recording medium.

5. A method according to Claim 2, further comprising the step of embedding, as said electronic watermark information, electronic watermark information indicating the original data if the recording medium is a read-only recording medium.

6. A method according to Claim 5, further comprising the step of embedding, as said electronic watermark information, electronic watermark information indicating copied data if the recording medium is a recordable recording medium.

7. A method according to Claim 2, wherein the type of the recording medium is determined depending upon whether or not a pit wobbling portion is detected from the recording medium.

8. A method according to Claim 1, further comprising the step of not embedding said electronic watermark information in the decoded data when the decoded data is output as playback data.

9. A method according to Claim 1, further comprising the step of embedding, as said electronic watermark information, electronic watermark information for analog

data in the decoded data when the decoded data is output in an analog format.

10. A method according to Claim 9, wherein the decoded data is converted into an analog signal, and the electronic watermark information for analog data is embedded in the analog signal.

11. A method according to Claim 9, further comprising the steps of determining the type of the recording medium, and changing the electronic watermark information for analog data based on a result of the determination.

12. A method according to Claim 11, further comprising the step of embedding, as the electronic watermark information for analog data, electronic watermark information indicating at least first generation recording allowed if the recording medium is a read-only recording medium.

13. A method according to Claim 12, further comprising the step of embedding, as the electronic watermark information for analog data, electronic watermark information indicating recording prohibited if the recording medium is a recordable recording medium.

14. A method according to Claim 11, further comprising the step of embedding, as the electronic watermark information for analog data, electronic watermark information indicating the original data if the recording medium is a read-only recording medium.

15. A method according to Claim 14, further comprising the step of embedding, as the electronic watermark information for analog data, electronic watermark information indicating copied data if the recording medium is a recordable recording medium.

16. A method according to Claim 1, further comprising the step of embedding, as said electronic watermark information, electronic watermark information for digital data when the decoded data is output in a digital format as the recording data.

17. A method according to Claim 16, further comprising the steps of determining the type of the recording medium, and changing the electronic watermark information for digital data based on a result of the determination.

18. A method according to Claim 17, further comprising

the step of embedding, as the electronic watermark information for digital data, electronic watermark information indicating at least first generation recording allowed if the recording medium is a read-only recording medium.

19. A method according to Claim 18, further comprising the step of embedding, as the electronic watermark information for digital data, electronic watermark information indicating recording prohibited if the recording medium is a recordable recording medium.

20. A method according to Claim 17, further comprising the step of embedding, as the electronic watermark information for digital data, electronic watermark information indicating the original data if the recording medium is a read-only recording medium.

21. A method according to Claim 20, further comprising the step of embedding, as the electronic watermark information for digital data, electronic watermark information indicating copied data if the recording medium is a recordable recording medium.

22. A method according to Claim 1, further comprising

the step of not embedding said electronic watermark information in the decoded data when an operating key is operated to give a playback command to play back an apparatus on which the recording medium is loaded.

23. A method according to Claim 22, further comprising the step of embedding said electronic watermark information in the decoded data when an operating key is operated to give a recording command to execute a recording operation in an apparatus on which the recording medium is loaded.

24. A data recording method comprising the steps of:  
determining whether or not electronic watermark information was detected from received data;  
if the electronic watermark information was detected,  
executing a recording operation of the received data  
according to the detected electronic watermark information;  
and  
if the electronic watermark information was not  
detected, canceling the recording operation of the received data.

25. A method according to Claim 24, further comprising the steps of, when the electronic watermark information is detected, decoding the detected electronic watermark

information, and controlling the operation of recording the received data according to a result of the decoding.

26. A method according to Claim 25, further comprising the step of executing the recording operation of the received data if the decoded electronic watermark information indicates first-generation-recording allowed.

27. A method according to Claim 26, further comprising the step of canceling the recording operation of the received data if the decoded electronic watermark information indicates recording prohibited.

28. A method according to Claim 24, further comprising the step of determining whether the data format of the received data is an analog format or a digital format.

29. A method according to Claim 28, further comprising the step of determining whether or not electronic watermark information for analog data was detected from the received data if it is determined that the data format of the received data is the analog format.

30. A method according to Claim 29, further comprising the steps of, if it is determined that the electronic

watermark information for analog data was detected, decoding the detected electronic watermark information for analog data, and executing the recording operation of the received data if the decoded electronic watermark information for analog data indicates first-generation-recording allowed.

31. A method according to Claim 30, further comprising the step of canceling the recording operation of the received data if the decoded electronic watermark information for analog data indicates recording prohibited.

32. A method according to Claim 28, further comprising the step of determining whether or not electronic watermark information for digital data was detected from the received data if it is determined that the data format of the received data is a digital format.

33. A method according to Claim 32, further comprising the steps of, if it is determined that the electronic watermark information for digital data was detected, decoding the detected electronic watermark information for digital data, and executing the recording operation of the received data if the decoded electronic watermark information for digital data indicates first-generation-recording allowed.

34. A method according to Claim 33, further comprising the step of canceling the recording operation of the received data if the decoded electronic watermark information for digital data indicates recording prohibited.

35. A method of outputting data read from a recording medium, comprising the steps of:

detecting copy management information from the data read from the recording medium;

determining the detected copy management information; and

embedding electronic watermark information in the data read from the recording medium according to the determined copy management information if the data read from the recording medium is output as recording data.

36. A method according to Claim 35, further comprising the step of embedding, as said electronic watermark information, electronic watermark information indicating recording prohibited if the detected copy management information indicates at least first generation recording allowed.

37. A method according to Claim 35, further comprising

the step of prohibiting the data read from the recording medium being output as the recording data if the detected copy management information is copy management information indicating recording prohibited.

38. A method according to Claim 35, further comprising the step of preventing said electronic watermark information from being embedded in the data read from the recording medium if the data read from the recording medium is output as playback data.

39. A method according to Claim 35, further comprising the step of embedding, said electronic watermark information, electronic watermark information for analog data if the data read from the recording medium is output in an analog format as the recording data.

40. A method according to Claim 39, further comprising the steps of converting the data read from the recording medium into an analog signal, and embedding the electronic watermark information for analog data in the analog signal.

41. A method according to Claim 35, further comprising the step of embedding, as said electronic watermark information, electronic watermark information for digital

data if the data read from the recording medium is output in a digital format as the recording data.

42. A data output method comprising the steps of:

determining the type of a destination device to which data is output;

determining whether or not the destination device is a device capable of transmitting and receiving the data in a secure state;

determining whether or not the designation device is a recording apparatus if it is determined that the destination device is a device capable of transmitting and receiving the data in a secure state;

determining copy management information attached to the output data if it is determined that the destination device is a recording apparatus; and

embedding electronic watermark information in the output data according to the determined copy management information.

43. A method according to Claim 42, further comprising the step of embedding, as said electronic watermark information, electronic watermark information indicating recording prohibited if the detected copy management information indicates at least first generation recording

allowed.

44. A method according to Claim 42, further comprising the steps of encrypting the output data and outputting the encrypted data, and not outputting key data for decrypting the encrypted data if the detected copy management information indicates recording prohibited.

45. A method according to Claim 42, further comprising the steps of encrypting the output data, and outputting key data for decrypting the encrypted output data if it is determined that the destination device is a device capable of transmitting and receiving data in a secure state but is not a recording apparatus.

46. A method according to Claim 42, further comprising the steps of encrypting the output data and outputting the encrypted data, and not outputting key data for decrypting the encrypted data if the destination device is not a device capable of transmitting and receiving data in a secure.

47. A method according to Claim 42, further comprising the step of determining whether or not the destination device is a device capable of transmitting and receiving the data in a secure state by determining whether or not the

destination device is compatible with an IEEE 1394 interface.

48. An apparatus for playing back a recording medium, comprising:

a head for reading data from the recording medium;

a decoder for decoding an output signal from said head;

and

an adding unit for embedding electronic watermark information in the data from said decoder if the data from said decoder is output as recording data.

49. An apparatus according to Claim 48, further comprising:

a determination circuit for determining the type of the recording medium based on the output signal from said head,

wherein said adding unit adds said electronic watermark information according to the type of the recording medium based on a determination result from said determination circuit.

50. An apparatus according to Claim 49, wherein said adding unit adds, as said electronic watermark information, electronic watermark information indicating at least one recording allowed if said determination circuit determines that the recording medium is a read-only recording medium.

51. An apparatus according to Claim 49, wherein said adding unit adds, as said electronic watermark information, electronic watermark information indicating recording prohibited if said determination circuit determines that the recording medium is a recordable recording medium.

52. An apparatus according to Claim 49, wherein said adding unit includes a generation circuit for generating electronic watermark information according to a result of the determination of said determination circuit, and an adding circuit for adding the electronic watermark information generated by said generation circuit in the data from said decoder.

53. An apparatus according to Claim 52, wherein said adding unit further includes a switch circuit between said generation circuit and said adding circuit, said apparatus further comprising a controller for closing said switch circuit when the data from said decoder is output as the recording data.

54. An apparatus according to Claim 53, wherein said controller opens said switch circuit when the data from said decoder is output as playback data.

55. An apparatus according to Claim 49, wherein said adding unit adds, as said electronic watermark information, electronic watermark information indicating the original data when said determination circuit determines that the recording medium is a read-only recording medium.

56. An apparatus according to Claim 49, wherein said adding unit adds, as said electronic watermark information, electronic watermark information indicating copied data when said determination circuit determines that the recording medium is a recordable recording medium.

57. An apparatus according to Claim 49, wherein said determination unit determines the type of the recording medium by determining whether or not a detection signal of a wobbled pit is obtained from the output signal from said head.

58. An apparatus according to Claim 48, wherein said adding unit does not add said electronic watermark information in the data from said decoder when the data from said decoder is output as playback data.

59. An apparatus according to Claim 48, wherein said

adding unit adds electronic watermark information according to an output format of the data from said decoder when the data from said decoder is output as the recording data.

60. An apparatus according to Claim 59, wherein said adding unit adds electronic watermark information for analog data if the data from said decoder is output in an analog signal format when the data from said decoder is output as the recording data.

61. An apparatus according to Claim 60, further comprising a converter for converting the data from said decoder into an analog signal, wherein said adding unit includes a generation circuit for generating the electronic watermark information for analog data, and an adding circuit for adding the generated electronic watermark information for analog data in the analog signal from said converter.

62. An apparatus according to Claim 61, wherein said adding circuit further includes a switch circuit between said generation circuit and said adding circuit, said apparatus further comprising a controller for closing said switch circuit when the data from said decoder is output as the recording data.

63. An apparatus according to Claim 62, wherein said controller opens said switch circuit when the data from said decoder is output as playback data.

64. An apparatus according to Claim 59, wherein said adding unit adds electronic watermark information for digital data if the data from said decoder is output in a digital signal format when the data from said decoder is output as the recording data.

65. An apparatus according to Claim 64, wherein said adding unit includes a generation circuit for generating the electronic watermark information for digital data, and an adding circuit for adding the generated electronic watermark information for digital data in the data from said converter.

66. An apparatus according to Claim 65, wherein said adding circuit further includes a switch circuit between said generation circuit and said adding circuit, said playing apparatus further comprising a controller for closing said switch circuit when the data from said decoder is output as the recording data.

67. An apparatus according to Claim 66, wherein said controller opens said switch circuit when the data from said

decoder is output as playback data.

68. A data recording apparatus comprising:  
a detector for detecting electronic watermark  
information from received data;  
an encoder for encoding the received data; and  
a controller for allowing the detected electronic  
watermark information from said detector to be decoded, and  
for controlling a recording operation of the data from said  
encoder according to the decoded electronic watermark  
information.

69. An apparatus according to Claim 68, wherein said  
controller executes the recording operation of the data from  
said encoder when the electronic watermark information  
detected by said detector, which is decoded, indicates first  
recording allowed.

70. An apparatus according to Claim 68, wherein said  
controller cancels the recording operation of the data from  
said encoder when the electronic watermark information  
detected by said detector, which is decoded, indicates  
recording prohibited.

71. An apparatus according to Claim 70, wherein said

controller cancels the recording operation of the data from said encoder when said detector cannot detect the electronic watermark information.

72. An apparatus according to Claim 68, wherein, if the received data is in an analog signal format, said detector detects electronic watermark information for analog data from the received data in the analog format.

73. An apparatus according to Claim 72, wherein said controller executes the recording operation of the data from said encoder when the electronic watermark information for analog data which is detected by said detector and which is decoded is electronic watermark information indicating one recording allowed.

74. An apparatus according to Claim 72, wherein said controller cancels the recording operation of the data from said encoder when the electronic watermark information for analog data which is detected by said detector and which is decoded is electronic watermark information indicating recording prohibited.

75. An apparatus according to Claim 72, wherein said controller cancels the recording operation of the data from

said encoder when the electronic watermark information for analog data was not detected by said detector.

76. An apparatus according to Claim 68, wherein, if the received data is in a digital signal format, said detector detects electronic watermark information for digital data from the received data in the digital format.

77. An apparatus according to Claim 76, wherein said controller executes the recording operation of the data from said encoder when the electronic watermark information for digital data which is detected by said detector and which is decoded is electronic watermark information indicating one recording allowed.

78. An apparatus according to Claim 76, wherein said controller cancels the recording operation of the data from said encoder when the electronic watermark information for digital data which is detected by said detector and which is decoded is electronic watermark information indicating recording prohibited.

79. An apparatus according to Claim 76, wherein said controller cancels the recording operation of the data from said encoder when the electronic watermark information for

digital data was not detected by said detector.

80. An apparatus for playing back a recording medium, comprising:

a head for reading data from the recording medium;  
a detector for detecting copy management information from an output signal from said head; and  
an adding unit for adding electronic watermark information according to the detected copy management information in the data read from the recording medium when the data read from the recording medium is output as recording data.

81. An apparatus according to Claim 80, wherein said adding unit includes a generation circuit for generating electronic watermark information according to a result of the detection from said detector, and an adding circuit for adding the electronic watermark information generated by said generation circuit in the data read from the recording medium.

82. An apparatus according to Claim 81, wherein said adding unit further includes a switch circuit between said generation circuit and said adding circuit, said apparatus further comprising a controller for closing said switch

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circuit when the data read from the recording medium is output as the recording data.

83. An apparatus according to Claim 82, wherein said controller opens said switch circuit when the data read from the recording medium is output as playback data.

84. An apparatus according to Claim 81, wherein said generation circuit generates electronic watermark information indicating recording prohibited when the copy management information detected by said detector is copy management information indicating at least one recording allowed.

85. An apparatus according to Claim 80, wherein said controller prohibits the data read from the recording medium from being output as the recording data when the copy management information detected by said detector is copy management information indicating recording prohibited.

86. An apparatus according to Claim 80, wherein said adding unit does not add said electronic watermark information in the data read from the recording medium when the data read from the recording medium is output as playback data.

87. An apparatus according to Claim 80, wherein said adding unit adds electronic watermark information according to an output format of the data read from the recording medium when the data read from the recording medium is output as the recording data.

88. An apparatus according to Claim 87, wherein said adding unit adds electronic watermark information for analog data if the data read from the recording medium is output in an analog signal format when the data read from the recording medium is output as the recording data.

89. An apparatus according to Claim 88, further comprising a converter for converting the data read from the recording medium into an analog signal, wherein said adding unit includes a generation circuit for generating the electronic watermark information for analog data, and an adding circuit for adding the generated electronic watermark information for analog data in the analog signal from said converter.

90. An apparatus according to Claim 89, wherein said adding circuit further includes a switch circuit between said generation circuit and said adding circuit, said

apparatus further comprising a controller for closing said switch circuit when the data read from the recording medium is output as the recording data.

91. An apparatus according to Claim 90, wherein said controller opens said switch circuit when the data read from the recording medium is output as playback data.

92. An apparatus according to Claim 87, wherein said adding unit adds electronic watermark information for digital data if the data read from the recording medium is output in a digital signal format when the data read from the recording medium is output as the recording data.

93. An apparatus according to Claim 92, wherein said adding unit includes a generation circuit for generating the electronic watermark information for digital data, and an adding circuit for adding the generated electronic watermark information for digital data in the data read from the recording medium.

94. An apparatus according to Claim 93, wherein said adding circuit further includes a switch circuit between said generation circuit and said adding circuit, said apparatus further comprising a controller for closing said

switch circuit when the data read from the recording medium is output as the recording data.

95. An apparatus according to Claim 94, wherein said controller opens said switch circuit when the data read from the recording medium is output as playback data.